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# Migration and Neoliberalism: Do Diasporas Facilitate Pro-Market Policies at Home? Policies

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# Migration and Neoliberalism: Do Diasporas Facilitate Pro-Market Policies At Home?

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# Abstract

The recent shift in migration literature towards a focus on migrant sending countries has been characterized by a negative impact of remittances on human rights and other political institutions. Furthering this literature, we claim that remittances increase neoliberal reforms in migrant sending countries. Given the multiplicity of incentives to support neoliberal policies on the part of the migrant, the remittance receiver, and the sending country's government, we expect the remittance share of GDP to positively influence the presence of neoliberal policies in the migrant-sending country. Using the Fraser Institute's Economic Freedom Index as a proxy for neoliberalism, we implement an instrumental variable model to address the endogeneity of remittances, and show that there is a positive relationship between remittance share of GDP and neoliberalism.

# Contents

# Dedication

To Nanie and Pampie, who gave me the world. I love you, always.

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# 1
# Introduction

Historically, migration literature has focused mainly on the economic changes a country undergoes upon the reception of migrants. As globalization began to pick up pace, and technological innovation made travel easier during the course of the past century, the global community began to grapple with their relationship to "newcomers". The most direct consequences of migration fall on the receiving country, which has skewed scholarship towards a focus on host economies.

It is only in the past few decades that migration literature has started to pay attention to the migrant sending country. This new focus has also sparked academic interest in the role of remittances (the money sent by migrants to family back home) in the economic and political realms of the origin country. Baudassé (2018) has published a comprehensive survey of this new wave [9]. Previous literature has largely ignored the potential socioeconomic and political changes that countries undergo as a consequence of emigration [1]. The first wave of this new body of literature has been characterized by optimism in regards to the positive influence of the diaspora on the country of origin. For example, Spilimbergo (2009) discusses the role of the diaspora in transferring democratic norms back to the country of origin [41]. Pfutze (2012; 2014) also discusses the role of the diaspora in the institutional quality of its home country, and claims

[1] The migration of people *out* of their home countries

it influences the mobilization of protests against autocratic regimes present in origin countries [33] [34].

The most recent wave of this new literature has started to question whether the optimism towards the diaspora's relationship with the country of origin has been warranted. Recent literature has suggested a negative impact of the increase in remittances on human rights [7]. Doyle (2015) has speculated that migration leads to a shift in government spending away from public goods because increased remittances change voting tendencies for households [18]. Some authors have also explored a reverse channel of causality where remittances increase the likelihood of autocracies or poor institutions [3].

This paper will attempt to contribute to the growing discussion of the role of the diaspora on the country of origin. Considering the contributions made by this new wave of literature, we claim that the diaspora, through the channel of remittances, has the power to positively influence neoliberalism in migrant sending countries. Neoliberalism is generally characterized by the presence of pro-market policies: privatization, dergulation, welfare reduction, trade liberalization, among others. Following the literature previously discussed (and to be expanded on in the following sections) we claim that the diaspora has incentive to lobby for neoliberal reforms in the migrant sending country, and the power of influence the voting preferences of their kin back home. We also claim that remittance recipients will benefit from these neoliberal policies because of their new income source.

The following section will construct a working definition of neoliberalism and discuss the theoretical impact of remittances on neoliberal reforms in migrant sending countries. We engage with existing literature to establish a theoretical chain of causality. Given the multiplicity of channels, we find that there is a need to empirically examine our claim. The following sections will give an overview of the foundations and history of neoliberalism, construct a theoretical basis for our argument, and empirically model hypothesized relationship.

# 2
# Neoliberalism

In order to assess the potential impact of remittances on neoliberal reforms in migrant sending countries, we first need to pin down a working definition of neoliberalism - an ambiguously yet widely used term both in academic literature and political rhetoric. In this section, we shall construct a definition of neoliberalism, mostly relying on David Harvey's *A Brief History of Neoliberalism* (2007), Quinn Slobodian's *Globalists* (2018), and Mirowski's *The Road to Mont Pelerin* (2009) [1]. In the following section, we will use this definition to support our use of the economic freedom index as our dependent variable, and also to explain its theoretical connection to remittances.

Neoliberalism at its most broad level is a political movement mobilized by corporations and motivated by corporate interests. Harvey characterizes a "neoliberal state" as one whose main goal is to create and maintain good conditions for capital accumulation for both foreign and domestic capital [24]. Underneath this overarching goal is a deeper purpose: to transfer the control of the economy from the government to the private market [12]. Shifting the role of the government in the economy says something more about individual liberty; this restructuring implies that the market, not the government, is the best arbiter of individual freedom [24].

[1] Please refer to these texts for more on Neoliberalism, as its history and theoretical determinacy are too robust to be fully covered in this paper

Although neoliberalism is a much broader concept than can be captured in the description of policies, it is essential to the arguments in the coming sections to define the types of policies that further the neoliberal agenda. Such policies will carry out the motives of the neoliberalism agenda by prioritizing corporate interests and limiting regulation and state involvement in economic affairs. First in these categories of policies is privatization. Privatization policies will cede control of once state-owned industries to private enterprises, thereby eliminating state interference and letting the market take control of certain industries. For the private sector, this alleviates competition from state controlled industries. Second is the deregulation of the labor market. These policies remove the government as the mediator of employer-employee relations by retracting regulatory legislation, and often have implications for unions and workers' bargaining rights [20]. Third is the deregulation of international capital flows. The elimination of constraints on capital flows fosters the goal of creating good conditions for capital accumulation. Policies that contribute to the reduction of the welfare state also get the label of neoliberal, since spending on welfare programs such as social security or food stamps is an imposition of government on the market, contradictory to the neoliberal agenda.

Centeno (2012) outlines three different dimensions to the "arc" of neoliberalism: "(a) a technical policy debate regarding the best mode of operating an economy; (b) an institutionalised crisis containment strategy involving political choices and power; and (c) the rise of a hegemonic ideology or system of thought" [12]. The trajectory of neoliberalism during the past century is characterized by these three dimensions, making it imperative that we look at each in order to fully understand it. The rest of this chapter will outline how neoliberalism has presented through these three dimensions over the past century.

## 2.1 Overview

Economic research (and the conceptualization of the economy as a whole, for that matter) had a different face before the Great Depression. Pre-1930, it was marked by business cycle research, which consisted of tracking patterns of economic crises and publishing certain statistics and

measures [38]. The conceptualization of the economy as something measurable and cyclic led policy makers to believe that they could manipulate the economy from the realm of the political. The founding neoliberals- Hayek, Mises, and Harbeler, among others - "concluded that the world economy was sublime, beyond representation and quantification", changing the conceptualization of the world economy [38]. This was the beginning of the intellectual movement of neoliberalism, which wouldn't make its way into mainstream policy until much later. The idea that the world economy was something beyond what models and statistics and indexes, would become the basis for a new way of carrying out economic policy. For these early neoliberals, "what could not be seen could not be engineered" [38]. If the economy was immeasurable, how could we think it effective to attempt to manipulate and control it by direct state interventions?

Hints of the idea that the economy was something *more* were present in the formation of the International Chamber of Commerce (ICC) in 1919. The post-WWI economic conditions begged the question of why there was no international governance of any aspects of the global economy. After WWI, there was widespread concern about trade inhibitions, partially motivating the need for global economic governance with regard to trade policies, international finance, and exchange rates. Crises provide fuel for new conceptualizations of the political economy, since the paradigm shift of a crisis often illuminates institutional and policy related shortcomings [2]. During the first meeting, "the members of the ICC declared that 'a nation is not an independent economic unit" and that "every day, the facts demonstrate the interdependence of all countries in the economic domain" [38]. The establishment of all economies as interdependent would become the basis for the neoliberal argument that *international* institutions were needed to insulate the global economy, since direct intervention on the economy contradicted the neoliberal conclusion that the economy was fundamentally unknowable.

The Great Depression of the 1930's sparked an era of Keynesian economics, developed by John Maynard Keynes in an attempt to understand what happened during the crash. The economic and social destruction caused by the Depression forced people to reconsider the previous policy

[2] A sentiment that is currently being mimicked globally

regime that had failed them. As previously mentioned, crises tend to usher in new political regimes in order to correct whatever had caused (or more moderately, not prevented) the crisis to begin with. Keynesian policy was invented to lift the economy out from under the rubble of the aftereffects of the Depression. Characterized by welfare programs and huge government spending to boost aggregate demand, Keynesian policy contradicted the basis of neoliberalism in all that it sought to prevent: the intervention of the state in the economy.

The need for welfare provisioning, however, was necessary in order to support the population during the mass unemployment after the Great Depression. This *forced* the government to be heavily embedded in the economy. FDR's New Deal (1933-1939) that was meant to stimulate the economy in effect fostered the "disintegration of the world order" according to neoliberals [38]. The New Deal's "organized labor, protectionism, and planning had 'politicized' economic processes and eroded the foundations of liberal international economic relations" [38]. The neoliberals of the time squirmed in the shadows at the politicization of the economy - what they would argue was the biggest problem ideological neoliberalism sought to solve.

World War II presented the same offenses to neoliberalism as the Great Depression did. The cost of war and providing provisions, in addition to the need to provide welfare programs both during and after the war, furthered the grasp of Keynesianism on economic policy. The increase in "social spending, public investment, enterprise ownership, and market regulation" to control the after effects of the war required the engorgement of the government which increased its role in economic affairs [12]. Between WWII and the OPEC oil crisis in the early 1970's, Keynesian policy was at its height, "the key guarantor of domestic peace and tranquility" was a "'class compromise' between capital and labour" [24]. This compromise was meant to satisfy the public concern for social issues such as unemployment and welfare that was at its height after the war. Planned economies, where the state owned key industries - such as in Britain, France, and Italy, became prevalent [24] . Competition, in countries where the state owned most key sectors, was sacrificed in the hopes of lower levels of unemployment and inequality. The prioritization of growth, employment and equality in this era meant heavy state control and regulation, which

inevitably put constraints on capital. In addition to the growth inhibiting capital constraints, the 1960's were marked by U.S. worker productivity decline and trade deficits. The neoliberals, once in the shadows, took note.

The establishment of the Mont Pelerin Society (MPS) in 1947 gave the neoliberals a more structured forum for discussion, but did not entirely lift them out of the margins. The neoliberals for the most part did not think that their ongoing discomfort with state intervention in economic affairs should be solved by a complete obliteration of the state's role in the economy. Their goal was to find the right institutions to sustain the often strained balance between the economic world and the political world [38]. The Geneva School of neoliberals prescribed neither an "obliteration of politics by economics nor the dissolution of states into a global marketplace but a carefully structured and regulated settlement between the two" [38]. The global economy as inherently 'unknowable' could not be entirely commanded by the political realm, but needed to be respected as an entity in its own right alongside the realm of the political. The separation of these two, for the MPS, could be partially fostered by policies of "privatization, deregulation, and financial and trade liberalization" [29].

The long rule of Keynesianism succeeded in bringing the economy back from the Great Depression and WWII. Keynes' policies worked for the most part, until they no longer worked. The OPEC [3] oil embargo of 1973 induced price shocks and sparked a time of sustained inflation and high unemployment in developed nations [12]. The simultaneous presence of stagnation (slowing growth) and inflation [4] contradicted the Keynesian belief that inflation was caused by an "overheated economy" [12]. Thus began the international rejection of Keynesian policies, since the theory could no longer explain what was happening as a result of the oil embargo. Beyond the rejection of Keynesianism, the crisis brought into question the legitimacy of the state in terms of its ability to impact economic outcomes [12]. The failure of Keynesianism (and potentially the nation-state as well) in both explaining and solving the economic issues resulting from the oil crisis caused political leaders and policy makers to turn to the neoliberals for a new model.

[3] The Organization of the Petroleum Exporting Countries
[4] What we now term as "stagflation"

With the shift towards neoliberalism as the prominent governing ideology, the problems inherent in previous economic policy were illuminated. Hayek, one of the founding fathers of neoliberalism, claimed that:

> "in this century our attempts to create an international government capable of assuring peace have generally approached the task from the wrong end: creating large numbers of specialized authorities aiming at particular regulations rather than aiming at a true international law which would limit the powers of national governments to harm each other." [25]

As the globalization took hold of the world, economies became more intertwined, creating an entity that was beyond individual state governance. Neoliberals illuminated the need for world economic governance. The 'globalists' that Slobodian (2018) refers to thought that the world order was most important to maintain, and that the dethronement of the nation-state through limiting the power of sovereignty would allow for the prioritization of the world order [38].

Harvey (2007) suggests that the first attempt at a neoliberal state was by Chile in 1973 [24]. The U.S. backed a coup led by Augusto Pinochet to (successfully) dismantle the government of the previous president Salvador Allende. Pinochet, after the coup and his subsequent installment as head of the government, brought in University of Chicago trained economists, who brought with them a neoliberal tilt [24]. Pinochet and the Chicago trained economists eventually "reversed the nationalizations and privatized public assets, opened up natural resources (fisheries, timber, etc.) to private and unregulated exploitations (in many cases riding roughshod over the claims of indigenous inhabitants), privatized social security, and facilitated foreign direct investment and freer trade" [24]. The mostly successful attempt by Chile to liberate the economy from the public sector would set the stage for more attempts at neoliberal states around the world.

The neoliberal surge that defined the 1980's is often attributed to former president of the United States, Ronald Reagan, and former prime minister of Britain, Margaret Thatcher. When Thatcher and Reagan took office in the late 70's and early 80's they were faced with the challenge of dealing with the stagflation (in part caused by the OPEC oil crisis) that the crisis of the 70's

had left them [24]. The crisis of capital accumulation and stagflation that marked the 70's derailed the formerly positive attitudes towards Keynesian policies. The immediate goals after the oil crisis were price stabilization and the elimination of inflation - which were achieved in the mid 90s "though paid for with significant economic downturns and increasing inequality" [12]. The secondary goal was the deregulation of the financial sector [12]. Alongside each other, Reagan and Thatcher made the 80's a decade marked by deregulation, financial liberation, and the restriction of labor power. Thatcher and Reagan were not secretive in their goals to eliminate restraints in favor of capital, reneging on the capital-labor compromise that had been in place the preceding decades. The World Bank, World Trade Organization (WTO), and the International Monetary Fund (IMF) followed suit in quickly rejecting Keynesian policy in favor of neoliberal ideas. These principles not only impacted global policy but also had "pervasive effects on ways of thought to the point where it [had] become incorporated into the common-sense way many of us interpret, live in, and understand the world" [24]. The underpinning ideology motivating neoliberalism is the "assumption that individual freedoms are guaranteed by freedom of the market and of trade" [24]. The shift towards neoliberalism in the 80's was not only the advent of a new prevailing type of economic policy to address previous policy failures, but was a change in public sentiment and ethics. The hegemony of neoliberalism that persisted throughout the 80's, 90's and early 2000's can be partially attributed to Reagan and Thatcher's commitment to making these ideas mainstream through policy initiatives.

In 1989, John Williamson (a senior fellow at the Institute for International Economics at the time) coined the now popular term 'Washington Consensus'. In his 1990 paper, he outlined 10 policy tools originally meant for certain developing Latin American countries that were suffering a debt crisis in the 80's [48]. The policy tools can be summarized as: (1) privatization, (2) liberalization of interest rates, (3) fiscal discipline, (4) reorientation of public spending priorities, (5) liberalization of FDI, (6) competitive exchange rates, (7) tax reform, (8) trade liberalization, (9) strong property rights, and (10) deregulation [47]. The term, despite being originally meant as a prescription for Latin American economies, has become widely used to describe more generally

market-oriented policy approaches, given the neoliberal nature of the ten policies it originally described.

The next benchmark achievement for the neoliberals was the formation of the European Union (EU) in 1993. This was an integral example of encasement of the 'global economy' (as Slobodian (2018) so often terms it) - or rather in this case, the economy of a union of multiple nation-states. The establishment of the EU meant that the law of the Union superseded the law (and sovereignty) of the individual states.

The ambiguity surrounding the term 'neoliberalism' is not without reason. Edwin Feulner of the Heritage Foundation [5], a prominent neoconservative [6], claimed that the neoliberal intellectuals' Mont Pelerin Society was founded

> "to uphold the principles of what Europeans call 'liberalism' (as opposed to 'statism'), and what we Americans call 'conservatism' (as opposed to 'liberalism'). Unlike socialism, neoliberalism flourished in the United States, even if it was more obscured here than elsewhere in the world." [29]

. The ambiguity of the term is rooted in the fact that it has a presence in both the academic/intellectual realm as well as the realm of policy. John Williamson, who coined the term Washington Consensus, defended himself against criticism regarding his use of the term neoliberalism:

> "I use the world 'neoliberalism' in its original sense, to refer to the doctrines espoused by the Mont Pelerin Society. If there is another definition, I would love to hear what it is so that I can decide whether neoliberalism is more than an intellectual swear word." [48]

[5] A conservative think tank founded in 1973

[6] A political movement popularized in the 60's and generally characterized by 'war hawks' that were sick of U.S. pacifism in foreign policy. This group equally valued capitalism and the market but were more skeptical than neoliberals of the social disturbances that could be caused by the reduction of state intervention in the economy. Brown (2006) claims that "what we have in neoliberalism and neoconservatism, then, is a market-political rationality and a moral-political rationality, with a business model of the state in one case and a theological model of the state in the other" [11]

The dichotomy of neoliberalism as an ideology and as a policy framework has often muddied the definition and use of the term. Neoliberalism is often associated with, and in some cases defined by, the era and policies of Reagan and Thatcher. The misconception that the fundamental value of neoliberalism is the retraction of the state has long been present due to the popularization of the Reagan/Thatcher era as a model of neoliberalism. The ideological foundations of neoliberalism, however, dictate that it is much more than that. During the 1986 general meeting of the MPS in San Vincenzo, Italy, James Buchanan - the president of the society - addressed widespread concern that MPS neoliberalism was rhetoric formed to fuel the agenda of anarcho-capitalists:

> "Among our members, there are some who are able to imagine a viable society without a state... For most of our members, however, social order without a state is not readily imagined, at least in any normatively preferred sense... Of necessity, we must look at our relations with the state from several windows, to use the familiar Nietzschean metaphor... Man is, and must remain, a slave to the state. But it is critically and vitally important to recognize that ten per cent slavery is different from fifty per cent slavery." [29]

The policies described as 'neoliberal' are characterized by the retraction of state intervention in the economy *but* are predicated on the notion that the economic realm cannot be intertwined with the political realm. The restructuring of institutional relations that neoliberalism tries to achieve "is equated not with gross downsizing of the government as much as it is with removing government from those areas where a different sort of discipline is prescribed" [29]. Thus the enactment of policies that nudge the government out of certain areas of economic life (private enterprise, trade, regulation, and the other areas discussed in this section) indicate for us that neoliberalism is awake and alive. The direct impacts of these policies and their relationship to remittances will be discussed in the following section.

# 3
# Theoretical Framework

We consider three different actors in the relationship between remittances and neoliberal policies: the migrant, the remittance receiver, and the government of the origin country. Remittances change the incentives of each of these actors in such a way that makes neoliberal policies particularly attractive. To the extent that the remittance receiving household shares the objectives of the migrant, they share their incentives. However, it is important to note here that there is a problem of asymmetric information between the migrant and the remittance recipient [7]. Since the migrant cannot be sure of how the recipient is using the remittances, we need to specify the incentives of both the migrant and the remittance recipient. In this section we will explore the incentives of each of these three actors for supporting neoliberal policies in the face of increased remittances.

## 3.1 Government

First we will look at the migrant-sending government's incentives. Drawing from the broad base of migration literature, we know that migration often occurs as a result of poor economic opportunity, corruption, economic crisis, conflict, political oppression, etc. Remittances, signalling the size of the diaspora, tell us that the origin country suffered from some such political or economic deficiency that would warrant intervention from an international agency. International devel-

opment aid, IMF structural agreements and other such loans are often conditioned on policy adjustments. According to Dreher (2006), the "availability of IMF money may deteriorate economic policy even before it has been disbursed" [19]. There is a "moral hazard" that accompanies IMF loans: governments can see these disbursements as income insurance and in turn feel less compelled to protect themselves against crises [45]. Thus the IMF and other such international institutions create policy requirements attached to their loans in order to prevent such moral hazard and the ineffectiveness of the loan. The involvement of international agencies in the economic/political affairs of a country is often closely intertwined with neoliberalism, considering one of the motivations of neoliberalism is to maintain and insulate the "world economy" through international institutions, as discussed in the previous section [38]. Thus these policy conditions are often motivated by neoliberal interests- they include requirements of trade liberalization, privatization, and financial deregulation.

The government is also under the pressure provided by international competition. As discussed in the previous section, the past few decades have seen the rise of neoliberalism, a wave of globalization, and an increase in the importance of the world economy. Henisz et al (2005) claim that between 1977 and 1999, a wave of neoliberal reforms came over the world, particularly "in infrastructure industries such as telecommunications, electricity, water, sanitation, and transportation, in which state-owned enterprises long enjoyed monopolies" [26]. The benefits of reforms in these industries, such as increased efficiency, are discussed later in the section. Henisz et al (2005) discuss three mechanisms through which the diffusion of neoliberal policies occur: competitive mimicry, normative emulation, and international coercion [26]. The globalization trend over the last century has coincided with the expansion of international trade, which fosters stronger cultural ties between countries. The consequent social embeddedness of countries increases their aptitude to conform to other countries, or to participate in " normative emulation" [26]. International coercion occurs through the vessels of institutions such as the IMF (as discussed in the previous paragraph) that make tradeoffs with governments: policy changes in exchange for development aid. Competitive mimicry is a strategy on the part of governments

to "prevent erosion of one's market position and social and political status" [26]. Government's mimic the policies of other governments in order to keep being competitive in the world economy.

Survival in this new globalized regime depends on a country's ability to attract Foreign Direct Investment (FDI) and to compete on the world stage. Countries are competing for portfolio investment and to house multinational enterprises. "Multinational enterprises (MNE) choose to invest in countries with less restrictive standards," so "foreign countries competitively undercut each other's standards in order to attract foreign direct investment", encouraging governments to deregulate both financial and labor markets [31]. The deregulation of labor markets - disassembling unions and stripping away workers' bargaining rights - allows corporations access to cheaper labor. Financial deregulation allows companies ease of capital mobility and to operate with less government oversight. Privatization provides corporations a market to enter without government competition. Governments must institute these neoliberal policies in order to be a viable competitor in this new regime.

Governments are not only under external pressure to enact neoliberal policies, but are also under domestic pressure to do the same. As discussed in the previous section, neoliberalism is a political project motivated by corporate interests [24]. The spreading global hegemony of neoliberalism encourages corporations to push governments in the direction of policies that favor corporate interests. From Chapter 2. we know that privatization policies reduce competition for companies, financial deregulation creates good conditions for capital accumulation, and trade liberalization also allows for easier export of goods. Since these policies are inherently beneficial to corporations, it is in their benefit to pressure government towards the institution of these policies.

Since remittances increase the disposable income of the receiving household, they also decrease the dependence of the household on the government [18]. With external income support, households do not have to depend on government welfare programs for their economic survival. Additionally, the burden of the taxes that would be necessary to support such welfare programs would outweigh the benefit of the programs themselves - making remittances an even more de-

pendable source of aid than the government [18]. The population's decreased dependence on the government also decreases the government's obligation to the population. The government can hence shirk their responsibilities to the population with ease, instituting policies that instead favor corporate interests.

As we previously stated, migration indicates a shortfall of economic opportunity or governance quality in the origin country. The population, acknowledging the shortcomings of its country, expects the government to take action to improve these circumstances. In order to retain the support of the population and prevent uprising, the government needs to show the population they are doing something, even if it is not the most effective action. Acknowledging this, incumbents have incentive in particular to enact neoliberal policies, because "the added short term revenue from doing so can alleviate fiscal problems, and thus increase their popular support" [26]. The pressure from the population thus gives the government incentive to enact policies that will make quick and noticeable changes to the economy.

## 3.2 Migrant

Next, we look at the incentives the migrant has for supporting neoliberal policies. It is first important to understand how they express their changed objectives given that they are living abroad (ie. they are geographically displaced from where the policy changes are occuring). Kapur (2014) outlines four different channels through which migration impacts the political economy of the migrant sending country: the absence, diaspora, prospective, and return channels [27]. We shall focus mainly on the diaspora channel. The diaspora (the body of migrants living outside of their home country) "challenge[s] the traditional boundaries of nation-states" [27]. Because of their connection to family in their home country, they exert political influence despite being geographically displaced. Kapur (2014) claims that this influence can happen in two different ways. In some cases, migrants maintain their rights to vote for policies in their home country, "whether as dual citizens or citizens residing abroad" [27]. The second way in which the diaspora can influence the political outcomes of their home country is through the strong connections they

maintain with their family residing in the home country. Since the family is likely relying on the remittances of the diaspora member as a main source of income, it experiences a moral obligation to represent the opinions of the remittance sender. Diaspora members thereby indirectly express their voting preferences through their family back home.

Migrants living abroad experience the hegemony of neoliberalism that has developed over the past several decades. They are socialized into the neoliberal norms of their host country, and in some cases are educated by institutions that support neoliberal norms. Spilembergo (2019) puts forth empirical evidence showing that individuals sent to be educated in democratic countries transfer democratic norms back to their home country [41]. We argue that this same transference applies to neoliberal norms. This transfer happens through the diaspora channel that Kapur (2014) discusses. Migrants, having adopted new neoliberal ideologies, communicate with the family they send remittances to and express these new ideologies. Households, under a moral obligation to the remittance sender, expresses the migrant's ideologies through their own voting preferences. Otherwise, as Kapur (2014) claims, if the migrant retains voting rights, they express their newly adapted ideologies directly [27]. Thus the socialization of migrants into the neoliberal norms of their host country are expressed through the voting preferences of the remittance receiving household via the diaspora channel.

Migrants have extra incentive to support neoliberal policies because of the financial transfer of the remittances themselves. Neoliberal reforms and the deregulation that accompanies them would reduce the cost of/fees associated with sending remittances. The remittance sender would benefit from the increased ease of completing the transfer. Additionally, they would no longer have to bear the additional costs of the transfer. Migrants again express these changed preferences through the diaspora channel.

Neoliberal policies of privatization and deregulation are also beneficial for the maintenance of the family ties fostered by remittances, and for the overall economic circumstances of those left in the origin country.Privatization allows for competition in industries that were once state controlled. The elimination of the government monopoly of certain industries allows competition

to drive down the prices of goods. For example, the privatization of the telephone industry will drive down communication costs, making it easier for migrants to communicate with their families abroad. Everyday goods will also become cheaper as a result of price competition, lessening financial burdens on those families living in the origin country - which is the ultimate goal of the migrant. Migrants realize the benefits that neoliberal policies would bring, and express the potential benefits through the diaspora channel.

We also consider a potential causal link through the prospective channel that Kapur (2014) discusses [27]. At the most broad level, Kapur considers the prospective channel to occur as a result of the way "expectations affect current behavior" [27]. Remittance receivers often put their new income towards the creation of a small business in order to create a stable form of income and potentially change the socioeconomic status of their family. Thus for the migrant, the sending of remittances is in effect an investment. In anticipation of the use of the remittances they are sending, the migrant has incentive to support policies that would make their investment profitable. As discussed in the previous section, neoliberal reforms are motivated by corporate interests, and as such strive to create conditions that are beneficial to private enterprise. Deregulation allows these small enterprises funded by remittances to operate without government oversight, and privatization removes the direct competition they would experience from the government. Diaspora members realize this potential investment and thus vote for neoliberal policies or express those voting preferences through the diaspora channel.

## 3.3 Receiving Household

The remittance receiving household shares some of the same incentives as the migrant for supporting neoliberal policies. Firstly is their objective to maintain low costs. Remittance receiving households benefit from the lower prices brought about by privatization - which pulls the government out of industries and allows competition to drive prices down. They also benefit because of the cheaper and easier access to communication. The telecommunications industry experiences the same price decreases from privatization, and also benefits from deregulation and reductions

in government oversight. Keeping in touch with their migrant family abroad is particularly important considering they depend on them for supplementary income. Since remittance receivers benefit from these policies, they have incentive to directly support them through their voting choices.

These households also share the migrant's concern for a potential future investment in a small enterprise. In an attempt to create another steady stream of income and elevate the household's economic circumstances, receiving households put their remittance income towards the establishment of small enterprises. Privatization and deregulation, as previously discussed, respectively decrease competition by the government and decrease government oversight, allowing ease of market entry. Thus such neoliberal policies would not ease the process of creating an enterprise and entering a market for households, but would also allow smoother and more profitable operation of the enterprise after entry.

The receiving household also similarly benefits from the reduction of fees associated with remittance transfers. The deregulatory initiatives started by neoliberal reforms would reduce the cost of sending/receiving remittances. Receiving households would benefit in both cases: if either the household or the migrant were bearing the cost of the transfer fee. If the household were to bear the cost of the transfer, they benefit from deregulation policies simply because they would no longer have to pay the fee. For the migrant, the cost of the transfer reduces the amount of money they are able to remit back to the receiving household, since they have a fixed amount of disposable income. Thus it is in the receiving households interest to reduce transfer fees regardless of who is bearing the cost.

Though neoliberal policies become beneficial to the migrant, government, and remittance receiver upon the increase of remittance flows, these policies still bear negative consequences for the poor. The very essence of neoliberalism touches on the age old battle of whether and how much the government should intervene in the market. Who is a better arbiter of freedom- the market, or the government? Will the market take care of the masses of poverty if the government decides not to step in? When classic Keynesian government intervention failed to work after the

OPEC oil crisis, policy makers began to listen to the neoliberals that had largely been pushed to the margins for years. Policies favoring the neoliberal ideology, however, have not come without their faults.

In putting faith in the market, neoliberals retract the policies that Keynesians and members of other schools of thought put in place to correct for whatever they thought the market was failing at. A major consequence of this is the abolition of the welfare state, as discussed in the previous section. Since the welfare state was designed to help those suffering socioeconomically, we must carefully consider the incentives the receiving household has for supporting policies that disassemble programs meant to provide them support. The new influx of income provided by remittances allows receiving households to be less dependent on the government and such welfare programs provided by it; a particularly relieving evolution for families particularly if the government was corrupt and unreliable to begin with. Doyle (2015) puts forth empirical evidence to support his claim that remittances decrease social spending/welfare expenditure on the part of the government [18]. Remittances give families an external income source to rely on, and so decrease incentive for them to support welfare policies that might be more unstable than the remittances they are receiving. He also claims that families have greater hope for social mobility/have a more positive outlook on the future when they receive remittances - which makes them less supportive of policies that include taxation for the purpose of social programs [18]. Since these families are on the lower end of the socioeconomic scale, the burden of new taxes would outweigh the benefit they would receive from the social programs the taxes would support. Lastly, Doyle claims that remittances make families more likely to see the income distribution in their country as fair - and so make those families less likely to vote for policies that promote redistribution [18]. Because remittances increase optimism and decrease reliance on government aid, families do not vote for increases in social spending or welfare programs- reinforcing the neoliberal distaste for the welfare state.

Individual circumstances blind remittance receivers to the broader implications of the policies they are voting for. Remittances, as discussed above, enchant families into denying the help

that the welfare state was constructed to provide. Instead, families vote for neoliberal policies that favor corporate interests and a "free" market. In doing so they bring about the dissolution of the welfare state and any government constructed program correcting for market failures in the realm of poverty and inequality. These families effectively vote for policies that oppress them and other members of their socioeconomic class. Navarro (2007) claims that neoliberal policies have been "remarkably unsuccessful at achieving what they claim to be their aims: economic efficiency and social well-being" [30]. He puts forth empirical evidence supporting the claim that neoliberal policies in fact increase inequality in those countries that enact them. The deregulation of labor markets that normally accompanies neoliberal reforms undermines the well being of the working class. Deregulation normally includes either the dissolution or disempowerment of unions, ultimately diminishing workers' bargaining rights. Additionally, the favoritism towards corporations and motivation for capital accumulation of neoliberal policies inflates the status of the upper class. Such policies favor corporations at the expense of the working class, and allow the upper class to continue extracting rents. The support of the upper class and negligence of the working class by neoliberal policies furthers socioeconomic divides and exacerbates inequality.

Since remittance receiving families are those that are negatively impacted most by increases in inequality, we must consider what inspires their ignorance towards the consequences of their policy preferences. There is a niche body of literature relating remittances to governance/institutional quality, and discussing the way in which remittances change families' relationship to governments. Ahmed (2017) observes that remittances, because they increase the economic stability of those receiving them, could lead the receivers to believe that their new wealth is attributed to improvements in the economy. Inferring that a good economy must be attributed to the government's decisions, remittance receivers have increased faith in government [3]. Thus remittances not only foster trust in the government, but also decrease the chance of success in a political protest against the government. If these governments are already carrying

out neoliberal policies, it is less likely that remittance receiving families would vote to change them considering their increased faith in the government.

## 3.4 Conclusion

Since there are three main actors that come into play during remittance transactions, we have multiple reasons on three different fronts for remittances to reorient the incentives and voting preferences of the different actors. The changes for the migrant, the government and the receiving household that are induced by remittances increase the benefit of neoliberal policies to the agents. The multiplicity of incentives on the part of three different agents to support neoliberal policies gives us reason to empirically analyze our claim. In the next section we will define other factors influencing neoliberalism in order to control for them in our empirical model.

# 4
# Data

Table 4.0.1. Summary Statistics

| | count | mean | Var | sd | min | max | Source |
|---|---|---|---|---|---|---|---|
| EFI | 2538 | 6.670842 | .9869825 | .9934699 | 2.769631 | 9.199463 | Fraser Institute |
| RemittofGDP | 4192 | .0343371 | .0042898 | .0654964 | 2.10e-07 | .9225797 | World Bank |
| NetODA | 3989 | 4.52e+08 | 7.31e+17 | 8.55e+08 | -1.05e+09 | 2.21e+10 | World Bank |
| FDIofGDP | 4795 | .0390008 | .0138432 | .1176569 | -.5522367 | 4.25053 | World Bank |
| TradeofGDP | 4774 | 85.92973 | 2595.746 | 50.94846 | .0209992 | 442.62 | World Bank |
| Crisis | 5572 | .112168 | .0996042 | .3156013 | 0 | 1 | Reinhardt & Rogoff 2010 |
| GDPpc | 5110 | 12678.2 | 3.22e+08 | 17950.83 | 164.3366 | 111968.4 | World Bank |

We begin our empirical analysis by justifying our use of variables. Our set of covariates, shown in the table above, are commonly used in the remittance literature. For our dependent variable, we follow De Soysa (2013) in employing the the Fraser Institute's Economic Freedom Index (EFI) as a measure for the extent of neoliberal reforms [16]. The EFI "measures the degree to which the policies and institutions of countries are supportive of economic freedom" [23]. The index is comprised of scores on size of government, legal systems and property rights, sound money, freedom to trade internationally, and regulation. Each of these subcomponents are based on what the Fraser Institute deems to be the "cornerstones" of economic freedom: personal choice, security of the person and privately owned property, freedom to enter markets and compete, and voluntary exchange. The index ranges from 0 to 10, 10 being the most economically free, 0

being the least. Refer to Gwartney & Larson (2009) for more detail on the construction of the index.

We argue that - given our discussion on neoliberalism in the first section - a change in the EFI of a country is the result of the enactment of some neoliberal/pro-market policy. Since the economic freedom index is rooted in the removal of boundaries to commerce, trade, and individual choice, it reflects the impacts of neoliberal policies. There are two indexes of economic freedom widely used in the literature: one constructed by the Fraser Institute, the other by the Heritage foundation. The Fraser Institute's index of economic freedom has been more widely used in the literature than that of the Heritage Foundation. Ram (2014) finds the two measures to be inconsistent, leading to potential inference problems [35]. He uses both as explanatory variables for the Human Development Index (HDI) published by the United Nations Development Programme, and finds the Fraser Institute's index to be more statistically reliable. Considering Ram's findings, we follow the literature in using the Fraser Institute's Index.

The first of our control variables is a dummy variable for International Monetary Fund (IMF) agreements. This variable codes for 1 if the country had any type of agreement with the IMF in that year, and 0 if there was no agreement. The IMF often engages in lending to developing nations in order to promote growth and development. The loans are highly subsidized, and the "money is conditional on observance of several performance criteria" [19]. These conditions on lending are two fold in purpose: they reduce risk for the IMF as the lender, and they also serve to further the IMF's development goals for that country. The conditionality on the loans serves to both protect the IMF from a country's incentive to abuse loan money, and to (try to) solve the problems that caused the country to ask for a loan. Among these criteria are often the elimination of price controls and the expansion of the financial sector. Since the past few decades of globalization have allowed for greater economic activity on the global scale, economic success has become more dependent on a country's ability to interact with the global economy. That is, a country must be **open** enough to survive. Thus IMF agreements typically involve policies that allow for more trade, freer markets, etc. It is for this reason that we anticipate the

presence of an IMF agreement to influence the EFI. We expect the coefficient on this variable to be positive since the conditionality on an IMF agreement would likely increase the EFI of a country.

We also observe a potential impact of economic crises on the institution of pro-market policies. Economic crises are rhetorical fuel for political parties to push through new policies. Faced with the aftermath of a crisis, politicians are forced by the public panic to make reforms in the hopes of gaining control of the current situation and preventing another crisis from happening. Galasso (2012) claims that, in reaction to economic crises, whether "pro-market structural reforms are adopted or the role of the state economy expands ultimately depends on political and electoral factors" [21]. That is to say, dependent on the ideology of the current administration, a crisis could be used as fuel to push through pro-market policies in the hopes of stimulating the economy, or to instate stricter interventionist policies in the hopes of calming the anxiety of those concerned with economic uncertainty and job insecurity. Hence we control for the presence of an economic crisis, expecting that it will either positively or negatively influence the EFI. This variable comes from Reinhardt & Rogoff (2010), and includes currency crises, banking crises, inflation crises, domestic sovereign debt crises, and external sovereign debt crises [36]. It is coded as 1 if there was any of these types of crises in a given year, 0 if there was no crisis.

We also consider the impact that foreign direct investment (FDI) will have on neoliberal reforms. Bak & Moon (2016) explore the potential impact that FDI has on authoritarian stability [6]. From this we gather more generally that FDI has some causal link to government incentives. Foreign direct investment is characterized by the expansion or creation of an enterprise owned or controlled by an entity in one country but operated in another (usually the lesser developed nation). We claim that investors and participants in these enterprises have a stake in the enactment of pro-market policies because the recession of the state inherently benefits the private sector. Hence we hypothesize that a high presence of FDI proportional to gross domestic product (GDP) will correlate with an increase in pro-market policies (and therefore an increase in the

EFI), and so we expect that FDI will be positively correlated with EFI. Data on FDI is drawn from the World Bank database.

Theory dictates that economic development, typically measured by GDP per capita, will also have an impact on the EFI. The greater the size of the economy, the more likely it is to have a higher EFI. As mentioned previously, it is unlikely for developed countries with a high GDP to be more closed off post-globalization. Thus GDP could be a contributing factor towards EFI. We also consider the angle that a bigger country might have an easier time pushing through policies, making it easier for them to boost their EFI. To the opposite end, it could be argued that countries with a large economy have *already* neoliberalized, diminishing the marginal impact of remittance flows on the EFI. Considering the theoretical indeterminacy of the type of impact that GDP per capita will have on the EFI, the multiplicity of potential chains of causality justify its use as a control variable.

A country's pre-existing trade activity is also likely to influence their EFI. Since the ability to trade is predicated on openness, we know that a high percentage of GDP dedicated to trade will correspond to a higher EFI. Countries that have historically been reliant on trade thus will have a higher EFI not due to an influx of remittances but to the economic structure of their country that has led them to have a robust trade sector. Since trade openness contributes to economic freedom, we expect the trade variable to have a positive coefficient.

Lastly, our variable of interest is remittance share of GDP. We gather this data from the World Bank, and define it as the total amount of personal remittance received by a country in a given year measured in current US dollars, as a percentage of GDP. This measure proxies for the size of the diaspora, since more people living abroad would correspond to more money being sent back home. We hypothesize that the size of a diaspora positively correlates to its lobbying power, and so will positively influence the EFI. To empirically test our hypothesis that diasporas facilitate pro-market policies in migrant sending countries, we regress the remittance share of GDP on the EFI with our preliminary set of controls.

# 5
# Methods

## 5.1 Panel Data

We conduct our analysis on an unbalanced panel data set of 199 countries from the years of 1991 to 2015. Panel data allows us to see the relationship between remittances and neoliberalism across the globe over time. Panel data sets have two dimensions: time and individual. In our study the individual we conduct the panel data analysis on is the country. Our analysis will include 199 countries across 15 years. We call this an "unbalanced" dataset because the years in which we have data for each variable are different for each country. Instead of interpolating, we leave the value of the variable missing. We will touch later in this section on how these holes in our data affect our analysis. Remember that our dependent variable, the Economic Freedom Index (EFI) is represented by $y_{it}$, and the matrix of all our covariates is represented by $X_{kit}$ (where $k$ is the control variable, $i$ is the country, and $t$ is the year).

Beginning with an Ordinary Least Squares Model (OLS), we regress the remittance share of GDP on the EFI with our set of covariates. The results are shown in the table on the following page.

Preliminary OLS results show us that we have a basis for furthering our exploration of the relationship between remittances and neoliberalism, since we have a distinctly positive coefficient

Table 5.1.1. OLS

| | (1) EFI |
|---|---|
| remittofgdp | 3.374*** |
| | (0.306) |
| netODA | 4.16e-11 |
| | (2.49e-11) |
| FDIofgdp | 2.082*** |
| | (0.429) |
| tradeofgdp | 0.00318*** |
| | (0.000585) |
| crisis | -0.280*** |
| | (0.0598) |
| GDPpc | 0.0000553*** |
| | (0.00000524) |
| _cons | 5.673*** |
| | (0.0567) |
| $N$ | 1540 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

significant at the .001 alpha-level. However, we immediately reject the OLS model since it cannot take into account the time dimension of the panel data.

Using panel data is advantageous because it allows us to account for certain unobservable variables that might be correlated with the regressors [39]. When variables that aren't included in the model are influencing the regressors, it causes the estimated coefficients to be biased (the omitted variable either positively or negatively impacts the estimated coefficients). This is called omitted variable bias, which is one of the ways in which endogeneity can arise in a model. Endogeneity occurs when the error term is correlated with one or more of the regressors. Remember that the error in the model is the difference between the true value of $y$ and the estimated value of $y$ (termed $\hat{y}$). That is, $\epsilon_{it} = y_{it} - \hat{y}_{it}$. It can arise from omitted variable bias, simultaneity, and measurement error (the latter two will be talked about later in this section).

Since panel data has both a time dimension and a cross sectional dimension, we must consider that the error term will have a time-variant component as well as a time-invariant component. Considering the multitude of countries included in our analysis, it is evident that there must be some inherent characteristics of each country that impact at least one or more of our explanatory variables. Culture, history, language, institutions etc. are all facets of a country that shape how it responds to increases in remittances, trade, etc. These facets are all time-invariant: they do not change over time. Since these inherent and time-invariant characteristics inevitably influence our explanatory variables, we know that omitted variable bias must be present. We will refer to these time-invariant characteristics of a country as "fixed effects" going forward. Since they are unobservable and thus not included in the model, these fixed effects are part of the error term. Thus the error term ($\epsilon_{it}$), like the panel data itself, will have both time-variant **and** a time-invariant component.

$$\epsilon_{it} = c_i + \mu_{it}$$

Since $c_i$ - the time invariant part of the error term - is inherently correlated with the regressors, the entire error term is also correlated with the regressors. In order to carry out an Ordinary Least Squares (OLS) regression, the assumptions of the Gauss-Markov theorem must be met. That is [22],

1. Explanatory variables are non-stochastic

2. The conditional mean of the error term is 0. Rather, the no unobserved variables included in the error term systematically affect $y$.

   - $E(\epsilon_{it}|X_{it}) = 0$

3. Homoskedasticity of the error term. That is, $\epsilon_{it}$ has constant variance

   - $\text{var}(\epsilon_{it}|X_{it}) = \sigma^2$

4. No autocorrelation within the error term. That is, given any $X_{it}$, $X_{ij}$ and $\epsilon_{it}$, $\epsilon_{ij}$ such that $i \neq j$,

- $\text{cov}(\epsilon_{it}, \epsilon_{ij}|X_{it}, X_{ij}) = 0$

5. There is 0 covariance between the error term and the regressors.

   - $\text{cov}(\epsilon_{it}, X_{it}) = 0$
   - $E(\epsilon_{it}X_{it}) = 0$

   Note that these two expressions are equivalent.

6. The number of observations $n$ must be greater than the number of explanatory variables.

7. The values of an explanatory variable must not all be the same. Rather, $\text{var}(X_{it})$ is some positive finite number for each regressor $X$.

8. The regression model is correctly specified

9. There is no perfect multicollinearity. Rather, there are no perfect linear relationships between any of the explanatory variables.

Since $\text{cov}(c_i, X_{it}) \neq 0$, the Gauss Markov assumption (5) is not met. The failure to meet this assumption means that OLS estimates would be biased, since the variance in EFI caused by part of the error term will be attributed to the regressors instead. That is,

$$E(x_{it}c_i) \neq 0 \tag{5.1.1}$$

$$E(x_{it}\epsilon_{it}) \neq 0 \tag{5.1.2}$$

$$\tag{5.1.3}$$

We also know that assumption (2) is violated as well. As previously stated, there is inherently omitted variable bias by virtue of the panel data having both a country and a time dimension. Thus we know that there are unobserved variables in the error term systematically affecting $y_{it}$, meaning that $E(\epsilon_{it}|X_{it}) \neq 0$

The explicit violation of these assumptions leads us to believe that OLS is not the correct model to display the relationship between remittances and neoliberalism in this panel data set.

## 5.2 Fixed Effects

Since OLS is unable to deal with both dimensions of the panel data, we follow the literature in considering the Random Effects (RE) and Fixed Effects (FE) models. The RE and FE models consider that there are group effects happening within the model, but treat the group effects in different ways. The RE model assumes that each "group" (in our case, country) is just a sample drawn from a larger population, implying that the variation between the groups is *random*. Thus in the RE model, the time invariant error $c_i$ is left as a part of the error term $\epsilon_{it}$. By contrast, the FE model treats each country as an individual that has their own characteristics, meaning the variation between each country is *systematic*. Thus the FE model pulls the country specific term $c_i$ out of the model.

We expect that the FE model will be more appropriate since it allows for the correlation of $c_i$ with the explanatory variables [39]. To confirm our expectations, we run both a FE and RE model, storing the estimates in the vectors $\hat{\beta}^{FE}$ and $\hat{\beta}^{RE}$ respectively. We then compute the Hausman statistic [39] $H$ as follows:

$$H = (\hat{\beta}^{FE} - \hat{\beta}^{RE})'[Var(\hat{\beta}^{FE}) - Var(\hat{\beta}^{RE})]^{-1}(\hat{\beta}^{FE} - \hat{\beta}^{RE}) \tag{5.2.1}$$

The null hypothesis is that $c_i$ is uncorrelated with the explanatory variables, and RE is preferred. Computing the Hausman statistic we get $H = 0$. Thus we reject the null in favor of the FE model.

The FE model allows for the time invariant part of the error term to be correlated with the regressors because it creates a dummy variable for each country. This dummy allows each country to have a different $y$-intercept - representing the inherent unobserved differences (or 'fixed effects') in each country. Thus our model is as such:

$$y_{it} = \beta_0 + \beta_1 X_{it} + \alpha_i + \mu_{it} \tag{5.2.2}$$

Where $X_{it}$ is our matrix of covariates, and $\alpha_i$ is a dummy variable for each country $i$. Numerically we can see how the fixed effects model eliminates the $c_i$ term that was biasing our OLS estimates.

Take our original equation,

$$y_{it} = \beta_0 + \beta_1 x_{1it} + \beta_2 x_{2it} + \cdots + \beta_k x_{kit} + (c_i + \mu_{it}) \tag{5.2.3}$$

Where $x_{kit}$ is the country dummy variable $k$ in year $t$ of country $i$. We complete a 'within transformation' (a transformation'within' each panel) by first averaging each term of the equation across time, and subtracting the result from the original equation [39].

$$\overline{y}_i = \beta_0 + \beta_1 \overline{x}_{1i} + \beta_2 \overline{x}_{2i} + \cdots + \beta_k \overline{x}_{ki} + (c_i + \overline{\mu}_i) \tag{5.2.4}$$

$$y_{it} - \overline{y}_i = \beta_1 (x_{1it} - \overline{x}_{1i}) + \cdots + \beta_k (x_{kit} - \overline{x}_{ki}) + (\mu_{it} - \mu_i) \tag{5.2.5}$$

Which can be written as:

$$\ddot{y}_{it} = \beta_0 + \beta_1 \ddot{x}_{1it} + \beta_2 \ddot{x}_{2it} + \cdots + \beta_k \ddot{x}_{kit} + \ddot{\mu}_{it} \tag{5.2.6}$$

where $\ddot{y}, \ddot{x}_{kit}, \ddot{\mu}_{it}$ are time demeaned terms (the mean of each is 0). In order for the FE model to be consistent, we must have that $\text{cov}(\ddot{\mu}_{it}, \ddot{x}_{jit}) = 0$ for all explanatory variables $j$. Thus we assume $\text{cov}(\mu_{it}, x_{jit}) = 0$ in order for the FE estimator to be consistent. Note that we no longer have to assume there is no correlation between the time-invariant part of the error and the explanatory terms.

Now that we have confirmed that the FE model best addresses the endogeneity caused by the correlation between $c_i$ and the regressors, we address the issue of heteroskedasticity. As mentioned previously, the presence of heteroskedasticity means the error term has non-constant variance. Heteroskedasticity does not break any assumption of the model, but can make the estimates less precise. It can also cause misleading small standard errors and p-values. We test for heteroskedasticity using Stata's xttest3 (refer to Stata documentation for an explanation of the test). We reject the null hypothesis of homoskedasticity, and conclude that there is heteroskedasticity.

To ensure that our standard errors are accurate in the face of heteroskedasticity, we cluster standard errors by country (since the errors are grouped by country) using Stata's *cluster* command. Using clustered standard errors, the standard errors in our model are consistent with heteroskedasticity.

Below are the results of the FE model.

Table 5.2.1. Fixed Effects

| | EFI |
|---|---|
| Remittances % of GDP | 2.804*** |
| | (0.818) |
| Net ODA | 5.14e-11 |
| | (4.16e-11) |
| FDI % of GDP | 1.376* |
| | (0.679) |
| Trade % of GDP | 0.00169 |
| | (0.00130) |
| Crisis | -0.278*** |
| | (0.0728) |
| GDP per capita | 0.000117*** |
| | (0.0000282) |
| Constant | 5.587*** |
| | (0.154) |
| Observations | 1540 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Since we have a strong positive coefficient on remittances as percentage of GDP, and it is significant at the alpha level of .01, we have reason to believe that our hypothesis is rooted in empirical truth - motivating us to continue our empirical analysis. Using the FE model, however, only allows us to account for the endogeneity that is caused by country fixed effects. What about the other unobservables, aside from $c_i$, that are inevitably included in the error term? As discussed in the beginning of this chapter, endogeneity can arise from a number of other things. Since it is certain that we do still have endogeneity in our model, we move on to a two-stage least squares estimation.

## 5.3 Two Stage Least Squares

Two stage least squares models (2SLS) utilize an instrumental variable ("an instrument") to address the endogeneity that we could not address in the fixed effects model. Our first model **only** accounts for the endogeneity caused by omitted variable bias- specifically via time-invariant country characteristics. We must consider that endogeneity arises from other channels as well: simultaneity, measurement error, and other types of omitted variable bias.

Theoretically, simultaneity could be present in our model because of the potential impact that neoliberalism has on remittances. We acknowledge that even if remittances do positively impact neoliberalism in migrant sending countries, the presence of neoliberalism could in fact be influencing remittances at the same time (thus making remittances an endogenous variable). The presence of neoliberal policies, as argued more specifically in the first section, retracts the state from economic affairs. This could mean that barriers to migration are eased, allowing people to migrate out of the country more easily and ultimately creating a larger diaspora to send remittances home. It could also mean that the pre-existing diaspora starts remitting more back home because of the reduction in costs to sending/receiving remittances. Theoretically we can conclude that there is cause for neoliberal policies to be influencing remittances at the same time remittances are influencing neoliberal policies. If we have that remittances are determined by something within the model, we know that remittances will be correlated with the error term $\epsilon_{it}$. Thus remittances is an endogenous variable.

We also consider measurement error as a source of endogeneity that could not be dealt with in our first FE model. If either the dependent or independent variables were measured imprecisely, the measurement error of the variable becomes part of the error term - meaning that the imprecisely measured variable and the error term will be correlated. Thus we have endogeneity arising from measurement error.

Lastly we have omitted variable bias. In our fixed effects model, we considered time-invariant country specific characteristics to be an omitted variable causing bias in the OLS estimator. We saw that using the fixed effects model allowed for this correlation between $c_i$ and the regressors.

However, we know that there must be other variables that are impacting the regressors outside of the time-invariant characteristics that we controlled for in the FE model. In this case an omitted variable will be an unobserved that influences the EFI **and** a regressor but is not included in the model. This will cause correlation between the error term and that particular regressor, thus creating endogeneity.

Since we have three defined sources of endogeneity that were not able to be addressed in the fixed effects model, we search for another way in which to 'remove' the endogeneity, so to speak. According to convention, we move to a two stage least squares model. First we will establish what the 2SLS model does and how it deals with the problem of endogeneity, then we will go into detail about our choice of instrument.

### *5.3.1 Model*

The 2SLS model uses an "instrumental variable" $z$ that is correlated with the dependent variable $y$ and uncorrelated with the endogenous explanatory variable $x$. That is, $z$ satisfies the following conditions [39]:

$$\text{cov}(z_{it}, \epsilon_{it}) = 0$$

$$\text{cov}(z_{it}, x_{it}) \neq 0$$

The 2SLS model is appropriately named: it is comprised of a first stage regression and a second stage regression. Given our original equation:

$$y = \beta_0 + \beta_1 x_{1it} + \beta_2 x_{2it} + \cdots + \beta_k x_{kit} + \epsilon_{it}$$

Where $k$ is the control variables in our model, and $x_{1it}$ is remittances as percentage of GDP - our endogenous variable.

Our first stage equation is defined as:

$$x_{1it} = \pi_0 + \pi_1 z_{it} + \nu_{it}$$

Where the IV $z_{it}$ is correlated with the endogenous variable $x_{1it}$, and $\nu_{it}$ is the error term.

The second stage equation is defined as:

$$y_{it} = \alpha_0 + \alpha_1 \hat{x}_{1it} + \alpha_2 x_{2it} + \cdots + \alpha_k x_{kit} + e_{it}$$

Where $\hat{x}_{1it}$ is the vector of predicted values of remittances as % of GDP obtained after running the first stage equation. The problem that we are trying to address is the correlation of $x_{1it}$ with the error term $\epsilon_{it}$. This first stage equation accomplishes this by removing the variance in $x_{1it}$ that is correlated with $\epsilon_{it}$. Note when we complete the first stage equation, $\hat{x}_{it}$ will be UNcorrelated with the error term since by assumption, $z_{it}$ is uncorrelated with $\epsilon_{it}$. That is, the endogenous part of $x_{1it}$ will become a part of $\nu_{it}$, leaving $\hat{x}_{1it}$ free of endogeneity. Note that:

$$x_{1it} = \hat{\pi}_0 + \hat{\pi}_1 z_{it} + \hat{\nu}$$

$$= \hat{x}_{1it} + \hat{\nu}$$

Recall that $\hat{\nu}_{it}$ is the residual of our first stage equation, and that the residual is always the difference between the actual and predicted outcome values. Thus $x_{it} = \hat{x}_{it} + \hat{\nu}$ intuitively makes sense. We use this to substitute into the following equation:

$$y_{it} = \lambda_0 + \lambda_1 x_{1it} + \lambda_2 \hat{\nu}_{it} + \epsilon_{it}$$

Which gives us:

$$y_{it} = \lambda_0 + \lambda_1 \hat{x}_{1it} + (\lambda_1 + \lambda_2)\hat{\nu} + \epsilon_{it}$$

Then we have that $\lambda_1 = \alpha_1$, and that $\hat{x}_{1it}$ and $\hat{\nu}_{it}$ are uncorrelated by our first stage equation. The $\hat{\nu}_{it}$ term in effect "controls" for the endogeneity in $x_{1it}$.

The estimator for the IV model will be defined as [39]:

$$\hat{\beta}_1 = \frac{\Sigma_{i=1}^{n}(z_{it} - \bar{z}_i)(y_{it} - \bar{y}_i)}{\Sigma_{i=1}^{n}(z_{it} - \bar{z}_i)(x_{it} - \bar{x}_i)}$$

Since the probability limit of $\hat{\beta}_1$ is $\hat{\beta}_1$ ($\text{plim}(\hat{\beta}_1) = \hat{\beta}_1$), we have that $\hat{\beta}_1$ is a consistent estimator for remittances ($x_{1it}$) [1].

[1] For a more detailed explanation of why $\hat{\beta}_0$ is consistent, and other properties of the IV estimator, please refer to [39]

### 5.3.2 Instrument Justification

Since $\text{cov}(z_{it}, \epsilon_{it}) = 0$, we know that conceptually our instrument $z_{it}$ affects $y_{it}$ ONLY through $x_{1it}$, the endogenous variable [39]. Thus for an instrument to fit our criteria, it must be correlated with remittances but uncorrelated with $\epsilon_{it}$. If the instrument is uncorrelated with $\epsilon_{it}$, then the instrument is *valid*. However, since $\epsilon_{it}$ is inherently unobserved, there is no way to empirically test the validity of our instrument $z_{it}$. Thus we continue by theoretically justifying the validity of $z_{it}$.

We follow Barajas et al (2009) in our choice of instrument, which will be the ratio of remittances to GDP of *all other* receiving countries [8]. That is,

$$z_{it} = \frac{(\Sigma_{i=1}^{n} remittances_i) - remittances_i}{(\Sigma_{i=1}^{n} GDP_i) - GDP_i}$$

Since we want $z_{it}$ to be uncorrelated with $\epsilon_{it}$, we theoretically want it to have **no** *direct* causal link to the EFI (remember that the instrument affects the EFI only through our endogenous variable, remittances). Since by construction, $z_{it}$ excludes the remittance to GDP ratio of country $i$ for each $z_{it}$, the instrument cannot be correlated directly with the EFI of country $i$. However, since $z_{it}$ contains the ratio of remittances to GDP of *all other* countries, we know that it has to be correlated with the remittance to GDP ratio of country $i$. That is, since $z_{it}$ represents the world trend of remittances, it is intuitive that the remittance to GDP ratio of country $i$ would be correlated with $z_{it}$. Thus we have that, theoretically, $z_{it}$ satisfies our requirements of being correlated with remittances and uncorrelated with $\epsilon_{it}$.

The instrument proposed by Barajas et al (2009) also satisfies the condition that $\text{cov}(z_{it}, x_{1it}) \neq 0$ [8]. We see this by regressing $z_{it}$ on $x_{1it}$ with the rest of our covariates. The results are reported in the table on the following page.

Since we have a strongly positive and significant correlation between $z_{it}$ and $x_{1it}$, we can conclude that $z_{it}$ meets the second assumption.

To further justify our use of $z_{it}$ as an instrument, we look at the **strength** of the instrument. Staiger & Stock (1994) provide a "rule of thumb" for testing weak instruments [42]. They claim

Table 5.3.1. Strength

| | (1) remittofgdp |
|---|---|
| remittinst | 9.185*** |
| | (0.536) |
| netODA | -5.44e-12*** |
| | (1.20e-12) |
| FDIofgdp | 0.0271 |
| | (0.0197) |
| tradeofgdp | 0.000206*** |
| | (0.0000299) |
| crisis | -0.00548 |
| | (0.00329) |
| GDPpc | -0.00000383*** |
| | (0.000000261) |
| _cons | 0.000972 |
| | (0.00364) |
| *N* | 2855 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

that if the first stage F-statistic is larger than 10, the instrument can be considered strong. However, this "rule of thumb" test only functions well for one instrument, and only takes into consideration bias and not size distortion [43]. Our first stage F-statistic does exceed 10, and so by Staiger & Stock's rule of thumb is considered strong [42]. To be sure, we move to the most recent methods of testing for weak instruments.

According to Stock and Yogo (2002), an instrument is weak if "the bias of the IV estimator, relative to the bias of ordinary least squares, could exceed a certain threshold $b$, for example 10%" [43]. Their test for a weak instrument is based on the Cragg-Donald (1993) statistic, however the null hypothesis is that the instrument is weak. Since weakness is defined by the bias of the estimator, Stock and Yogo (2005) determine critical values that represent the maximum amount of relative bias that could be present in the IV estimator. After running the 2SLS model using Stata's *xtivreg2* command, we obtain Stock and Yogo (2002)'s critical values [2]. Each critical value corresponds to a maximal amount of bias that can be present in the IV estimator [43]. Stata reports critical values for $10\%, 15\%, 20\%$ and $25\%$ maximal possible bias. If the first Cragg-Donald statistic [3] (analog to the f-statistic of the first stage equation) is bigger than the critical value, we can conclude that our IV estimator has a maximum bias of the corresponding percentage [4]. When running the 2SLS model, we find that the reported Cragg-Donald statistic exceeds the critical value for a 10% maximum estimator bias. Thus we reject the null hypothesis that the instrument is weak and conclude that it is strong enough to use in our model [15].

### *5.3.3 Endogeneity*

Now that we have established the model and justified the use of our instrument, we empirically establish the endogeneity of remittances as % of GDP. We do this in two ways. We repeat the same proccess of the Hausman test as we did earlier in this chapter for the fixed and random effects models. This time the null hypothesis is that OLS is the preferred model, and the alternative hypothesis is that endogeneity is present and 2SLS is preferred. Since our Hausman

[2] please refer to Stock and Yogo's paper for more on the construction of these critical values
[3] See Cragg & Donald (1993)
[4] Please see [4] for a table of critical values

statistic for these two estimations is 0, we reject the null and conclude that there is endogeneity and thus a need to use the 2SLS model.

We can see empirically the presence of endogeneity more clearly by running some regressions. First we take our first stage equation (shown below), and save the estimated residuals $\nu_{it}$.

$$x_{1it} = \beta_0 + \beta_1 z_{it} + \beta_3 x_{2it} + \cdots + \beta_k x_{kit} + \nu_{it}$$

We then include the estimated residuals in our second stage equation (shown below).

$$y_{it} = \alpha_0 + \alpha_1 x_{1it} + \cdots + \alpha_k x_{kit} + \alpha_{k+1} \nu_{it}$$

The results are shown below.

Table 5.3.2. Endogeneity

| | EFI |
|---|---|
| Residual | -5.809*** |
| | (1.232) |
| Net ODA | 5.29e-11* |
| | (2.48e-11) |
| FDI % of GDP | 1.338** |
| | (0.455) |
| Trade % of GDP | 0.00222*** |
| | (0.000616) |
| Crisis | -0.161* |
| | (0.0645) |
| GDP per capita | 0.0000740*** |
| | (0.00000655) |
| Remittances % of GDP | 8.769*** |
| | (1.184) |
| _cons | 5.422*** |
| | (0.0775) |
| *N* | 1540 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Since the coefficient on the first stage residual is large in magnitude (the sign is not of importance) and significant, we can conclude that there is endogeneity. Since $z_{it}$ is by construction

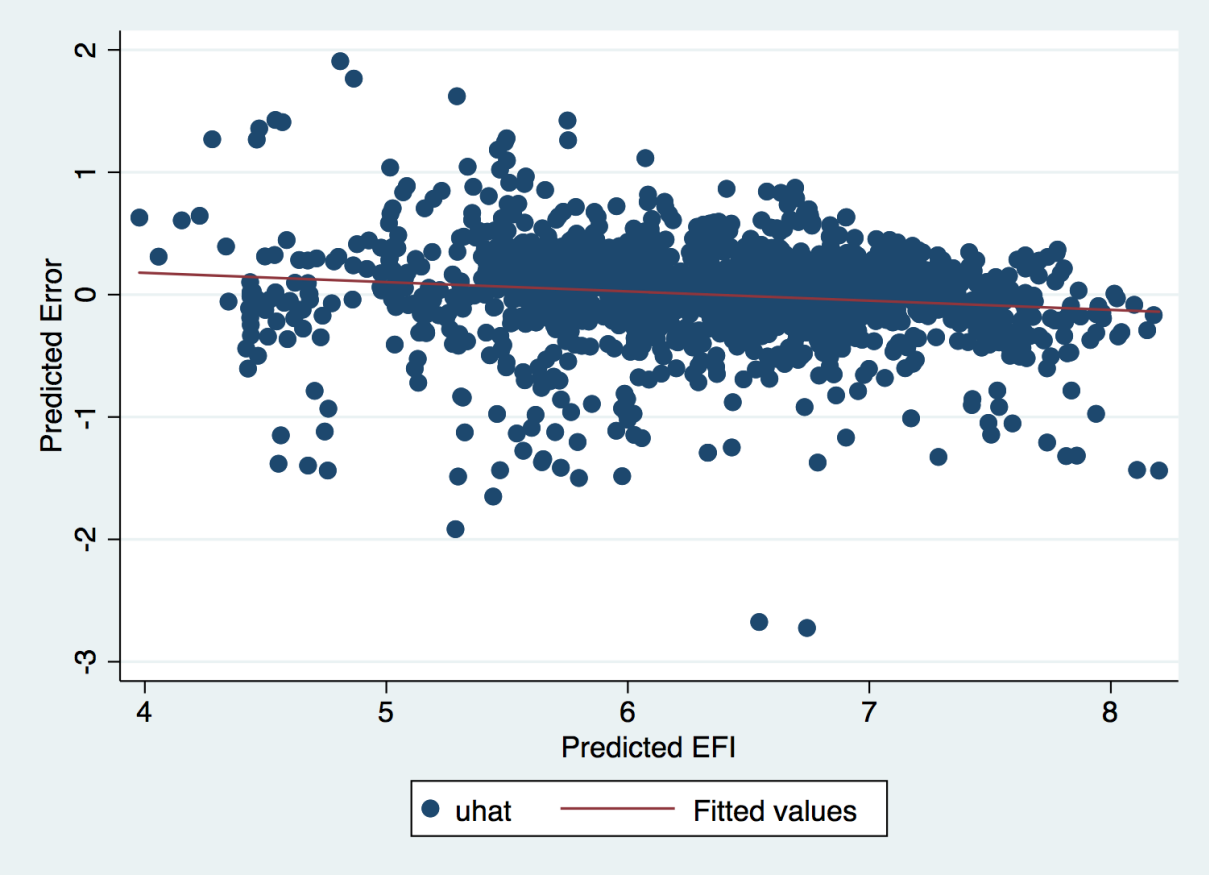
*not* correlated with the error term $\epsilon_{it}$, we know that $\hat{x}_{1it}$ will be uncorrelated with $\epsilon_{it}$. This is because any of the variation in $x_{1it}$ that is *not* determined by $z_{it}$ will be included in the residual $\nu_{it}$.

Thus when we include the residual $\nu_{it}$ from the first stage in the second stage equation, the coefficient on the residual tells us there was a part of our remittance variable that was correlated with the original error term $\epsilon_{it}$. Since we have empirically justified the presence of endogeneity and the use of our instrument, we move on to the results.

### *5.3.4 2SLS Results*

Note that in the absence of a predetermined test for the presence of heteroskedasticity in a 2SLS model, we proceed by using a visual representation.

Figure 5.3.1. Heteroskedasticity



The graph above shows a cone shaped distribution of the estimated errors, leading us to conclude that there is unequal variance of the error term. Given this visual representation, and that we previously corrected for heteroskedasticity in the fixed effects model, we will employ the same country-clustered standard errors as we did in the FE model. Thus all of the test statistics and estimates will be robust to heteroskedastic errors. Then our final 2SLS model is as follows:

$$y_{it} = \beta_0 + \beta_1 \hat{x}_{1it} + \cdots + \beta_k x_{kit} + \epsilon_{it}$$

Table 5.3.3. 2SLS

| | EFI |
|---|---|
| Remittances % of GDP | 9.861*** |
| | (2.294) |
| Net ODA | -1.10e-11 |
| | (4.83e-11) |
| FDI % of GDP | 0.787 |
| | (0.516) |
| Trade % of GDP | 0.00104 |
| | (0.00133) |
| Crisis | -0.185* |
| | (0.0781) |
| GDP per capita | 0.000106*** |
| | (0.0000269) |
| *N* | 1536 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We consider the 9.861 coefficient on remittances as % of GDP to be a very large and positive magnitude. Since we are measuring remittances as a percentage of GDP (represented as a porportion out of 1), the coefficient tells us that a 1% increase of remittance share of GDP corresponds to .09861 increase in the EFI *on average*. Note that the standard deviation of the EFI is .99[5]. However it is unlikely that a country's remittance share of GDP would increase by an entire percentage point in one year. It is more likely that remittance share of GDP will

[5]Please refer to the table at the beginning of chapter 4

move by tenths or hundreths of a percent. Thus we can reinterpret the coefficient to mean that a 0.1% increase in remittance share of GDP corresponds to a .9861 average increase in the EFI. This is roughly equivalent to one standard error of the EFI. Also note that the inclusion of our controls (net ODA, FDI, Trade, and economic crisis) means that this effect is contingent upon holding these factors constant. Since the coefficient is significant at the alpha-level of .001, we have strong reason to believe that remittances impact neoliberal policies.

Also note that the inclusion of an instrumental variable decreases the significance of the coefficients on our other control variables, compared to our OLS and FE estimates. However our crisis dummy remains significant at the .05 alpha-level. Our coefficient of the crisis variable is $-0.185$, meaning that the presence of a crisis [6] *decreases* the EFI by 0.185 on average. This is consistent with our expectation that a crisis would cause political leaders to tighten up economic policy potentially in fear of another crisis occurring or in order to reign in the current crisis (or both).

GDP per capita remains significant at the .01 alpha-level. The coefficient indicates that a unit increase (measured as $1 per person) coincides with a .000106 increase in the EFI. Since the standard deviation of GDP per capita is 17950.83, we know that a $1 change in GDP per capita is relatively insignificant. Thus we can reinterpret the coefficient as meaning a $100 increase in GDP per capita corresponds to a .0106 increase in the EFI on average. This is consistent with our hypothesis that the relative size of the economy to the population could mean an inherently higher EFI since bigger economies are more globalized, or that it is easier for bigger economies to push through policies.

### *5.3.5 2SLS by Region*

Next we run the 2SLS model individually for each region. The World Bank defines seven distinct regions of the world: North America, East Asia and the Pacific, Europe and Central Asia, Sub-Saharan Africa, Middle East and North Africa, Latin America and the Caribbean, and South

[6] Note that the crisis dummy is coded as 0 if there is no crisis, and 1 if there is a crisis. Thus a unit increase in the crisis variable is equivalent saying the presence of a crisis.

Asia. Please refer to table A.0.1 in the Appendix for key summary statistics of each region. Considering that there is often a regional convergence among countries, we expect that some regions might present a stronger or a weaker relationship between remittances and neoliberalism than the world trend that we saw in the previous section. The results are provided in the table below.

Table 5.3.4. 2SLS by Region

| | Reg 1<br>EFI | Reg 2<br>EFI | Reg 3<br>EFI | Reg 4<br>EFI | Reg 6<br>EFI | Reg 7<br>EFI |
|---|---|---|---|---|---|---|
| RemittofGDP | 10.86** | 4.269** | 1.127 | 4.893 | 3.344*** | 29.55*** |
| | (3.746) | (1.537) | (1.240) | (5.792) | (0.833) | (3.676) |
| NetODA | -3.31e-11 | -1.81e-10** | 9.33e-12 | -1.38e-10 | -6.83e-11 | -3.03e-11 |
| | (3.81e-11) | (6.26e-11) | (1.08e-10) | (7.24e-11) | (5.31e-11) | (4.81e-11) |
| FDIofGDP | -0.173 | 0.400 | 4.907*** | 1.981 | 10.08 | 1.514* |
| | (0.343) | (0.845) | (1.191) | (1.782) | (5.606) | (0.617) |
| TradeofGDP | 0.0000599 | 0.00621** | -0.00107 | 0.00212 | 0.0137*** | -0.00712** |
| | (0.00136) | (0.00202) | (0.00160) | (0.00383) | (0.00356) | (0.00249) |
| Crisis | -0.408*** | -0.187 | -0.298*** | -0.481** | -0.371* | 0.171 |
| | (0.0866) | (0.165) | (0.0679) | (0.163) | (0.149) | (0.131) |
| GDP pc | 0.0000776** | 0.000246*** | -0.00000825 | 0.000202*** | 0.000304** | 0.000241*** |
| | (0.0000263) | (0.0000230) | (0.0000241) | (0.0000409) | (0.000102) | (0.0000575) |
| *N* | 158 | 176 | 418 | 139 | 97 | 548 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

| Regions | |
|---|---|
| Label | Region Name |
| Reg 1 | East Asia |
| Reg 2 | Europe & Central Asia |
| Reg 3 | Latin American & Caribbean |
| Reg 4 | Middle East & North Africa |
| Reg 5 | North America |
| Reg 6 | South Asia |
| Reg 7 | Sub-Saharan Africa |

Note that since North America only contains the United States and Canada, region 5 is omitted from the regression table because there is not enough data to run the model. We see that there is a heterogenous effect of remittance share of GDP on EFI across regions. Since the coefficients for Latin America & the Caribbean and Middle East & North Africa are not significant, we cannot conclude anything about these results. Thus we will focus on the results of Sub-Saharan Africa, South Asia, and East Asia & Pacific.

We begin with East Asia and the Pacific. The coefficient of remittance share of GDP, 10.86 is higher than our preliminary 2SLS coefficient, indicating that the relationship between remittance share of GDP and neoliberalism is stronger in that region than the average relationship in all the regions. This indicates that a percentage increase in remittances corresponds to a 1.086 average increase in EFI. The crisis and GDP per capita variables remain significant with the same sign as in our original model - thus our interpretation remains the same.

We also note that South Asia has the lowest significant coefficient on remittance share of GDP. A percent increase in remittance share of GDP increases the EFI .033 on average in South Asia, as opposed to .098 on average among all regions. Since South Asia has both the highest average remittance share of GDP (and highest level of remittances in USD) and also the *lowest* average GDP per capita, we would expect the effect of remittances on the EFI in South Asia to be higher than the effect among all countries. Low GDP pc would provide incentive for people to emigrate, and a high remittance share of GDP would indicate a stronger presence of neoliberalism [7]

Though we cannot with certainty determine the cause for this difference in impact that defies our expectations, we can speculate. We hypothesize that there might be a diminishing returns effect for remittances. That is, after an original increase in remittances sparking an increase in the EFI, the subsequent increases in remittances produce progressively smaller impacts on the EFI. Since South Asia has a high remittance share of GDP yet a low coefficient, it could be the case that South Asia is on the end of an upward trend in remittances where the marginal effect

[7]The claim that a high average remittance share of GDP would lead us to expect a higher increase in the EFI relies on the cutt-off effect in the original 2SLS model that we discuss in section 5.4.3

on neoliberalism is small. Refer to the table below to see the average remittance share of GDP of all South Asian countries over time.

Figure 5.3.2.


The graph shows us that there has been an upward (or even exponential) trend in remittance share of GDP that starts to drop off in the last few years of our data. This could indicate that the recent increases in remittances have had no effect on neoliberalism in South Asia because earlier and steeper increases in remittances could have already pushed neoliberalism to its limits in South Asia.

Most notable is the increase of the coefficient on remittance share of GDP for Sub-Saharan Africa. The coefficient of 29.55 and p-value of 0 indicates that there is a very strong positive and significant relationship between remittances and neoliberalism in Sub-Saharan Africa. The interpretation of this value is that a percent increase in remittance share of GDP corresponds to a 2.95 increase in the EFI of Sub-Saharan Africa on average. Remember that the standard deviation of the EFI is .99 [8]. The standard deviation of the EFI for *only* Sub-Saharan Africa is .89. Using *either* benchmark for standard deviation, a percent increase in remittance share of GDP corresponds to an average increase in EFI of *more than* two standard deviations.

[8]Please refer to Table 5.3.4

Again, we cannot establish with certainty a reason for Sub-Saharan Africa having a much larger correlation between remittances and neoliberalism. However, this result is consistent with our conjecture that diminishing returns are pushing down the coefficient in South Asia. Note that Sub-Saharan Africa - despite not having a notable remittance share of GDP - receives the *least* amount of total remittance inflows of all of the countries. Since the very low level of remittances corresponds to a very high impact of remittances on the EFI in this region, we suspect that the diminishing returns effect discussed in the context of South Asia is acting on the opposite end in Sub-Saharan Africa. That is, since remittances are at such a low total level, the marginal increases in EFI produced by an increase in remittance share of GDP will be large comparative to the increase in remittances. We expect that if the level of remittance inflows increased in Sub-Saharan Africa, then their marginal impact on the EFI would decrease. This division of our model into regions shows that high levels of remittances correspond to low marginal impacts of remittances on the EFI, and low levels of remittances correspond to high marginal impacts of remittances on the EFI. Thus we have reason to believe that there are diminishing returns to neoliberalism within regions. If remittances have already pushed neoliberalism to the extent that the associated incentives allows them, then it makes sense that any further increases in remittances would be less impactful.

Sub-Saharan Africa also has an interesting regional effect because the trade coefficient has switched signs while remaining significant. This is the opposite effect we expect trade to have on the EFI [9]. We hypothesize that this negative and significant impact of trade on the EFI could be a result of long-present economic characteristics of Sub-Saharan Africa. There is a broad base of literature on the "resource curse" (otherwise known as the "Dutch Disease"); a term coined to represent the phenomenon of resource rich countries being stuck in cycles of poverty or low growth despite having access to potential income from exports. This literature has explored how the presence of natural resources (often in the context of Sub-Saharan Africa) impacts

[9] Please refer to Chapter 4 or the discussion of results in section 5.3.4 for an explanation of expectations

not only growth rates but also democracy and the quality of political institutions [10]. Since the literature establishes a link between resource richness (normally measured by exports) and political institutions, we hypothesize that the potential detrimental impact of natural resource exports on governance quality could lead trade to lower EFI in countries that export mainly natural resources.

We also note that Europe & Central Asia as well and Sub-Saharan Africa are the only two regions where our crisis variable is insignificant. We hypothesize that this could potentially be a result of these being two regions containing the most countries. It could be the case that, given the multiplicity of countries included in the regions, there is too much variation in crisis presence across the countries included in these regions.

Given the disparity of coefficients between each of the regions, we can conclude that there is a *heterogenous* effect of remittances on neoliberalism across regions.

## 5.4 Robustness

### *5.4.1 Missing Data*

For an unbalanced panel data set, the convention in the field of economics is to complete regression analysis with the holes in the data (as opposed to interpolating). Since we are using an unbalanced panel, we find a need to see how sensitive our results are to missing data points. Thus we do an informal test to see how this missing data is potentially impacting our regression analysis.

We run a for-loop dropping one observation with replacement and running the model each iteration. The result is a vector of coefficients obtained from running the model [11] with $n-1$ observations. We claim that if a missing data point was important to the model, the dropping of that data point would significantly change the coefficient of remittances.

[10] Collier (2010), Auty (2007), and Ulfelder (2007) contribute to this literature on the impacts of natural resource richness on political and economic outcomes

[11] for access to the results of this and the following robustness checks please contact the author

After running the for-loop, we find that **no** dropped data point changed the coefficient larger than one standard error of the original model coefficient. From this we can establish that the missing data in our unbalanced panel are not influential in the relationship between remittances and neoliberalism in the 2SLS model.

### *5.4.2 Country Drivers*

Our second sensitivity analysis uses another for-loop to drop an entire country panel at a time, with replacement. Though we have a strongly positive and significant relationship between remittances and neoliberalism as discussed in section 5.3.4, we cannot be sure that this relationship is being driven by a particular country. Thus by dropping one country each iteration, we are able to determine the magnitude of the influence of that particular country on the results.

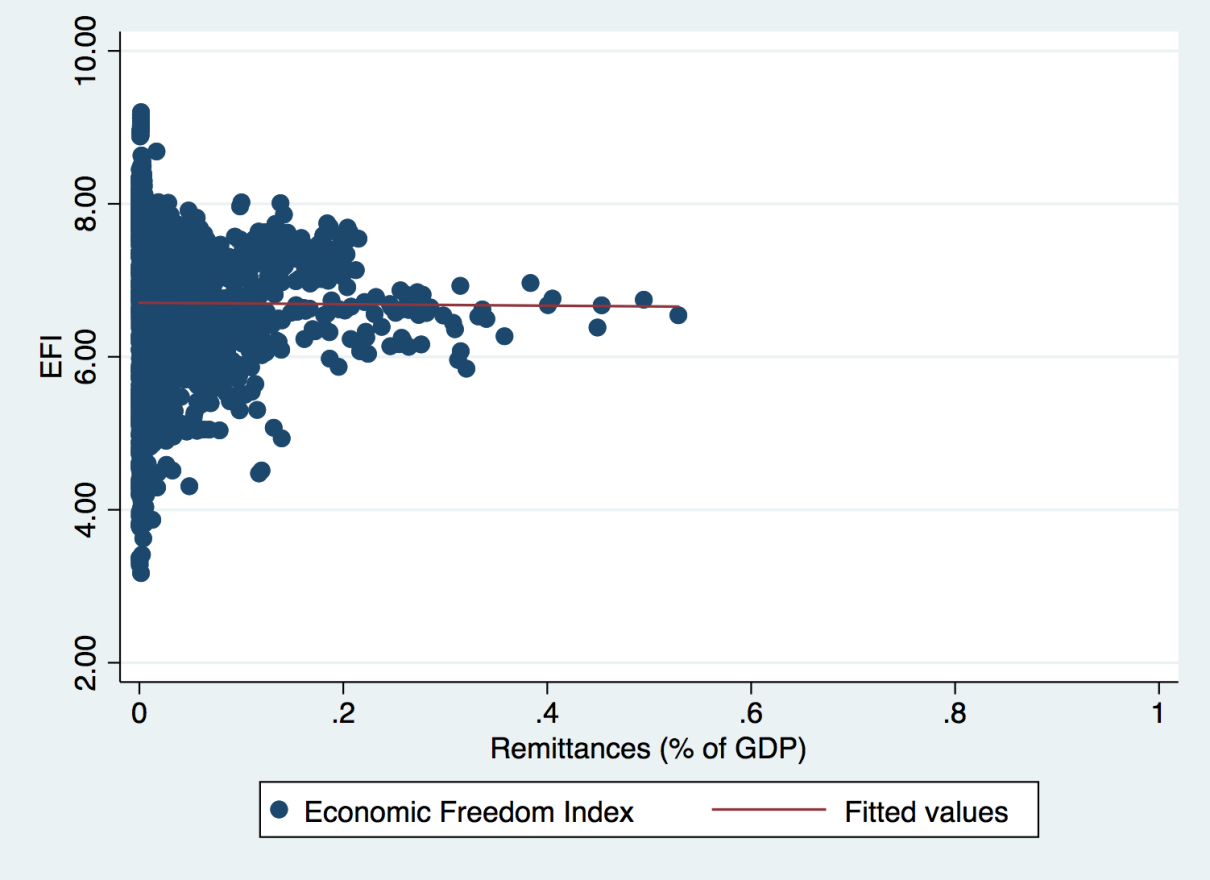
Employing the same standard as in the previous test, we check the new vector of regression coefficients to see if any are outside of one standard error (plus or minus) of the original coefficient. Since all coefficients are *within* one standard error of the original regression coefficient (9.861), we conclude that there are no particular country drivers of the relationship between remittances and neoliberalism.

### *5.4.3 A Threshold for Remittances*

Next we consider the possibility that the relationship between remittances and neoliberalism is dependent on how important remittances are to the economy of the receiving country. We predict that there is a threshold for remittances as percent of GDP below which remittances aren't a significant enough part of the country's economy to be pushing neoliberalism. Note that in the below figure [12], the EFI varies more for observations with lower remittance shares of GDP. Since there seems to be a convergence of the EFI after a certain level of remittance share of GDP, we have empirical reason to explore the presence of a remittance threshold.

[12] note that the plotted points represent individual observations, *not* entire panels

Figure 5.4.1. Remittances vs. EFI




Again we run a for-loop, this time dropping all countries with average (across time) remittances as % of GDP below a certain threshold. Each iteration, we increase the threshold for remittances as % of GDP. After pushing the threshold to .0018% remittances of GDP, we have a consistently higher coefficient. The results below show the 2SLS model with country clustered standard errors *without* countries that have an average remittance share of GDP below .0018%. Please see Table A.0.2 in the appendix for a list of dropped countries and their average remittance share of GDP across time.

Imposing a threshold for remittance share of GDP at .0018% increases the remittance coefficient from 9.861 to 10.03. The coefficient remains significant at the .001 level. Note that the magnitude and significance of the control coefficients are almost exactly the same as those in the original model. Thus we have a stronger (and equally as significant) relationship between

Table 5.4.1. Average Remittance Threshold

| | (1) EFI |
|---|---|
| remittofgdp | 10.03*** |
| | (2.329) |
| netODA | -1.42e-11 |
| | (4.80e-11) |
| FDIofgdp | 0.714 |
| | (0.500) |
| tradeofgdp | 0.00109 |
| | (0.00138) |
| crisis | -0.189* |
| | (0.0837) |
| GDPpc | 0.000123*** |
| | (0.0000270) |
| *N* | 1495 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

remittances and neoliberalism for countries with an average remittance share of GDP above .0018%.

The results in this section demonstrate that there is a notable impact of remittance inflows on the presence of neoliberal policies in the remittance receiving country. We determine that there is a heterogenous effect across regions but *not* across individual country panels. We also determine that the results are robust to missing data, and that the results are strengthened by imposing a minimum threshold on remittance share of GDP.

# 6
# Conclusion

In order to entirely evaluate the relationship between remittances and neoliberalism that we find in this paper, it is important for us to look at the actual implementation of neoliberal reforms. There has been much academic work on the economic and social effects of neoliberal policies [1]. This literature mostly argues that neoliberalism produces negative socioeconomic effects in terms of increasing institutional inequality. Navarro (2007) addresses the self-contradiction present in neoliberal policies:

> "Another correction that needs to be made as a rebuttal to neoliberal dogma is that neoliberal public policies have been remarkably unsuccessful at achieving what they claim to be their aims: economic efficiency and social well-being." [30]

Though neoliberals of the MPS and the general intellectual foundations of neoliberalism intended to shift the politico-economic structure in order to *ensure* individual freedom, the implementation of these ideas in policy do not realize these intentions. The realization of the aims of neoliberalism, if they are ever to be realized, will occur in the long run. Thus the time lapsed between policy implementation and the intended effect of those policies needs to be considered.

[1] For examples, please see [46] [49] [50] [40] [32]

The short run cost of imposing these policies most detrimental to those who were struggling in poverty to begin with.

There is an inherent "tendency to look at the distribution of world power while ignoring class power within each country" [30]. That is, neoliberal policies do well to address the power struggles between countries, but do fail at (and even exacerbate) power struggles *within* a country. The class structure that is ignored by neoliberal policies is most affected by them. In countries that follow neoliberal public policies, the gap between the top and bottom rungs of the socioeconomic ladder widens as poverty expands and the rich grow richer [30]. The Reagan administration, though efficient in making institutional changes, ultimately "change[d] the nature of state intervention, such that it benefited even more the upper classes and the economic groups (such as military-related corporations) that financed [Reagan's] electoral campaigns" [30]. As we have seen in the first chapter, neoliberal policies include privatization and the general prioritization of corporate interests. The elite - the controllers of said corporations - benefit from relaxed regulations and freer capital flows. Meanwhile, those that were struggling to begin with become deprived of the welfare programs that once supported them. Since the upper class holds the power, it has the political influence to lobby for such neoliberal policies - and consequently the ability to maintain class power by ensuring that the bottom stays at the bottom. Neoliberalism, then, is the "practice of the dominant classes of the developed and developing worlds alike" [30].

This begs the question: why would anyone lobby or push for policies that would adversely affect them in the end? Since families are immediately better off because of the extra income they receive from remittances, they are blinded by the detrimental effects of the neoliberal policies that are enacted. This immediate improvement in financial circumstances for remittance receiving families is the ability to change their outlook on the economic and political state of their country. Remittance receivers consequently perceive that things are better, and could potentially attribute their newfound situation to government action, leading them to support the administration and/or policies in place [3]. Remittance receivers' then act on their incentives

to support neoliberal policies because they are ignorant of short run costs of neoliberalism and because remittances lead them to falsely trust the government.

Understanding the implications of neoliberalism (which we cannot do fully in the scope of this paper) brings an air of caution to our results. In our analysis, we conclude that a bigger diaspora size is linked to more neoliberal reforms in the country of origin. It is important, then, to note that those countries receiving remittances had economic and political shortcomings that sparked migration to begin with. According to Kapur, "the relative importance of political and economic factors underlying migration decisions will affect the nature and intensity of engagement with the country of origin after departure" [27]. From this we can deduce that a larger diaspora size (marked by a higher remittance share of GDP) indicates that the institutional political and economic shortcoming of the origin country were either more severe or more widespread comparatively. Since existing literature concludes that neoliberalism increases inequality by increasing the wealth at the top and decreasing wealth at the bottom, neoliberalism will have more detrimental development outcomes for countries that have a broader base of disenfranchised people to begin with. That is, based on our results, countries with higher remittances will end up with higher inequality through the diaspora-neoliberalism channel we have established.

This begs another question: will remittances induce a cyclic downturn of development outcomes for countries with high remittance shares of GDP? If remittances increase neoliberal reforms, and there is a consensus that neoliberalism increases inequality, then the resulting inequality would cause another wave of migration, restarting the cycle. The results in this paper then, when discussed in the greater context of neoliberalism, have serious theoretical implications for development. Thus the general positive outlook on remittances as a development mechanism in the literature needs to be questioned.

There is space in this new and growing body of literature to expand on the economic and political dimensions of remittances and migration. Given that there are more dimensions of migration and remittances to be explored, the chain of causality established in our results could be extended. The combined effect of increased household income and a neoliberalized state could

induce financialization. Neoliberalism, because it promotes massive steps toward deregulation and capital mobility, creates a more complex and more politically influential financial sector [12] [28]. The remittances that induce neoliberalization (as we have discovered in this paper) also increase household income, potentially creating a higher demand for formal financial institutions. Thus the effect that we find of remittances on neoliberalism warrants further research integrating the topic of financialization.

Since we have found a heterogenous impact of remittances on the EFI across regions, our results also call for a deeper empirical analysis of this relationship in each individual region. These regional groupings could be due to a regional fixed effect that could be explored qualitatively at a more anthropological level. Culture determines social relations, beliefs, and norms, among others. Since many of the channels through which remittances impact neoliberalism are rooted in familial ties, the relationship between remittances in neoliberalism must be impacted by the structure and dynamic of those ties, and by beliefs about money. Then how do attributes of different cultures impact the way in which neoliberalism responds to diaspora size in different countries? We can account for these unobserved differences across countries *empirically* but are in need of a more bottom-up methodological framework in order to know more about these differences.

Since we assess this relationship at a broad level, across countries and time, we cannot give specific policy recommendations given the diversity of institutions and other country specific characteristics. However, based on questions raised in the previous chapter, both international and domestic policy needs to account for the dynamics of remittances and migration that we have discussed throughout this paper. Developing countries might need political safeguards to protect against remittances inducing a downward spiral that worsens development outcomes. The pressure to neoliberalize on developing countries is overwhelming, and does not only come from the incentives provided by increased remittances. Developing countries often see other nations imposing neoliberal reforms, and follow suit in the hopes that the extra income they are getting from remittances will help make these reforms successful in solving their problems.

International institutions such as the IMF and the World Bank corner developing countries into neoliberal reforms by imposing conditions on loans and development aid. Given the relationship we find, there is a need to figure out a way to potentially leverage the income gained from remittances to subvert this pressure in an effort to protect developing countries from the woes of neoliberalism. Our discussion also brings into question the pro-market policy implementation that are often forced on developing countries by international institutions as requirements for development aid. Conditions on aid might be more destructive to developing countries than originally intended. Considering that pressure on developing nations to neoliberalize is *already* coming from remittances and other international pressures, and that neoliberalism is in the short run detrimental to development, there might be a need for international institutions to reconsider the structure of development aid.

While migration literature has historically focused on the impact of migration on the migrant receiving country, we contribute to a growing body of work exploring the impact of migration on the sending country. We contradict the general consensus that remittances have a positive of this new body of work that remittances have positive development outcomes for migrant-sending countries. Like Abdih et al. (2012) and Ahmed (2017), our findings establish that there is reason for caution when evaluating the influence of remittances on the political economy of the country of origin [3] [1].

As migration rates increase inline with interconnections and technological advancements of the world, remittance flows become a more integral part of understanding political economies, and diasporas gain more political power. The results found in this paper confirm that the size of the diaspora has an influence on the political economy of the migrant sending country. We go further than the existing literature in establishing that the size of the diaspora positively influences the implementation of neoliberal reforms in the country of origin through the channel of remittances. These results establish cause for further study on this relationship and its implications both theoretically and empirically.

# Appendix A

Table A.0.1. Summary Statistics By Region

| Region | Avg. Remitt (% of GDP) | Avg. GDP pc ($) | Remitt (thousands $) |
|---|---|---|---|
| Reg 1 | 2.38 | 11817.75 | 1944863.7 |
| Reg 2 | 2.23 | 24522.69 | 2108429.2 |
| Reg 3 | 2.94 | 8308.629 | 1251928.5 |
| Reg 4 | 2.42 | 15726.92 | 1837900.5 |
| Reg 5 | 2.15 | 54686.34 | 2520568 |
| Reg 6 | 3.67 | 1712.442 | 7242546 |
| Reg 7 | 2.72 | 2074.013 | 471923.47 |

Table A.0.2.

| Dropped Panels | | |
|---|---|---|
| Country | Avg. Remittances (% of GDP) | Region |
| Chad | .0000135 | Sub Saharan Africa |
| Central African Republic | .0000145 | Sub Saharan Africa |
| Kuwait | .0000217 | Middle East & N. Africa |
| Libya | .0000489 | Middle East & N. Africa |
| Angola | .0000958 | Sub Saharan Africa |
| Chile | .000101 | Latin America & Caribbean |
| Eritrea | .0001732 | Sub Saharan Africa |
| Saudi Arabia | .0001768 | Middle East & N. Africa |
| Venezuela | .0001872 | Latin America & Caribbean |

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